performed. A typical tumor was found at the pylorus. The Fredet operation was done, and even though the child had vomited everything before the operation, he did not vomit following the operation. However, the enteritis continued, and death occurred sixteen days after the operation. This death was undoubtedly due to the enteritis, which Dr. Porter feels could reasonably be blamed to the thickened feeding.

The last baby of this series of sixteen was an eight months' premature, and was one month old when brought to operation. He weighed six and one-half pounds at birth, and at operation weighed four and one-half pounds. Dr. Fleischner, with whom we saw this patient within an hour after it was brought into San Francisco, had his doubts about the baby being able to stand surgery, but in as much as it seemed hopeless otherwise, we urged operative treatment, and within another hour a marked tumor was exposed and divided by the Fredet method. Anesthesia for this operation lasted fifteen minutes. The baby is now well and in apparently good condition.

Some years ago we reported a series of some twenty other cases of patients with congenital pyloric stenosis subjected to surgery. In that series of twenty were two babies of the same mother. These were her first two children—boys. She had after that time a third boy who was perfectly normal and healthy. One of the patients in the present series is a girl baby, the fourth child of this same mother, upon whom the Fredet operation was done. We report this fact of the same mother having three babies with the same condition, and one without, with the hope that it may in some way aid in clearing up the cause of congenital pyloric stenosis because, being purely in the realm of conjecture, no definite logical reason so far has been offered.

The Fredet operation, improperly named after Rammstedt, has been so thoroughly pictured and described that it is only necessary to remark that the simple splitting of the tumor mostly by divulsion down to the mucus membrane, with care being used at both ends, and especially at the duodenal end where the tissues are so thin, so as not to tear through the lumen of the stomach or bowel, is so simple and can be done so rapidly that, from a surgical standpoint, one should have no mortality if the babies are not kept under observation and medical care until it is too late for either medicine or surgery to be of value.

Since using the incision high up in the middle of the right rectus over the liver, suggested by Dr. Butler, in as much as the liver drops back over the operative wound, we have no trouble from hernia or protrusion of the delicate omentum. The abdomen should be closed in layers exactly as in an adult.

The rate of illegitimate births in the United States, insofar as we can assume that the sections for which adequate data are available are representative, is considerably lower than that in most European countries. Inadequacy of birth registration in this country makes it impossible to make proper comparisons, but apparently the usual proportion of illegitimate births to total births is from 3 to 4 per cent.

SURGICAL RESULTS FROM AN ECONOMIC STANDPOINT *

By GAYLE G. MOSELEY, M. D., San Francisco.

The economic result of surgery is not a new problem, but it is a problem which, owing to new experiences and changed conditions, presents a new viewpoint. The most important function of surgery, of course, is to prolong human life and relieve pain. After these are accomplished, the outstanding problem is the economic result. Medicine and surgery are recognized as important factors in industrial production. No large business enterprise is now undertaken without competent medical supervision, and it is the duty of the medical profession to study industrial needs from a medical standpoint, and be prepared to offer suggestions to industry that will make the service of the physician more valuable.

In the past, the initiative in this line has come from industry, and unless the medical profession, by proper organization and education, prepare themselves to furnish the necessary service and advice, industrial medicine will soon be dominated by industry, instead of by the physician.

One very important problem before the profession today, and the issue should be squarely met, is that of standardizing surgical results. Dr. Harry Mock[1] states the case very clearly, when he says, "All standards of treatment in the future must be judged by the economic end results obtained."

The same forces which have operated to standardize medical schools and hospitals, will in time bring about, within reasonable limits, the standardization of surgical results. While we all realize that in any particular case, there may be peculiar conditions present, such as old age or previous disease, which may modify the result, yet when you take a very large number of the same kind of surgical patients, the average result, and the average lost time, should not vary greatly. The records of any large insurance company, doing compensation business in the State of California, will show that there is a great variation in the results obtained in cases of approximately the same kind by different physicians. This variation is so great, that it cannot be wholly accounted for by the different conditions present in the individual patient. The statistics of the large insurance companies, if tabulated, will very quickly show who are the best surgeons in the state, judging from the economic results obtained and, after all, results are what count.

When you consider that the insurance companies writing compensation business in the State of California are paying about $3,000,000 yearly for medical and hospital services, it is evident that, with the record of results before them, they are going to employ those physicians who get the best results in the shortest time, and this is the answer to that much-discussed question that the injured employe should have free choice of physicians. Until such time as all physicians are equally competent, this would be an economical

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impossibility. The demands for medical and surgical service are subject to the same law of supply and demand as every other commodity, and those purchasing the commodity will always seek to get the best available for the amount of money expended.

The interest of the patient must always be the first consideration, and certainly no law of medical ethics is violated when those responsible for the treatment of those injured in industry, select the surgeon whom they think most competent to bring about a speedy cure, and return of the injured person to his place in industry.

The importance of returning injured persons to industry at the earliest possible moment has not been sufficiently emphasized, and it should be borne in mind that the early return of the injured person to industry is just as important in those cases seen in every day practice, as in the cases that are industrial. The time lost by patients that are not industrial is just as valuable to the individual and to society at large, as is the time lost in cases covered by the Workmen's Compensation Law.

To give some idea of the immense amount of time lost, on account of industrial accidents, it might be well to call attention to the fact that in 1919 a total of 7,228,983[2] days were lost on account of industrial injuries. This includes time lost on account of total disabilities, and deaths. A death disability is figured as a loss of six thousand days. If you add to this the amount of time lost through accidents, that are not industrial, it will give you an idea of the tremendous economic problem involved.

In 1919, there were approximately sixty thousand industrial accidents in the State of California which caused loss of time from work. If through good surgical treatment an average of two days could have been saved on each case it would represent a saving of 120,000 days, which would represent an economic saving of approximately 328 years.

Surgeons frequently have given insufficient consideration to the problem of getting the injured person back to work promptly. This is largely due to the fact that surgeons fail to consider treatment from the economic standpoint. The surgeon's duty is to restore function, and his obligation to the patient has not been fulfilled until the patient is back on the job. In the past, many surgeons have considered that they were through with the patient when he was able to leave the hospital. As a matter of fact, in many cases the important part of the treatment is just beginning when the patient leaves the hospital. The fact is that the patient should be under the direct supervision of the surgeon until he is back at work, and should feel that at all times he is under treatment. The fact that many patients in the past have not been properly supervised from the time of leaving the hospital until they return to work, is responsible for a large economic loss, as well as many mental invalids or so-called traumatic neuroses. Injured persons today are certainly entitled to the help which comes from properly applied physiotherapy, occupational therapy, graduated exercises, and such other measures as experience has shown to be of value in the rehabilitation of the injured.

One important point to be emphasized in connection with rehabilitation work is that it must be under the direct supervision of the surgeon. If this rehabilitation work is permitted to get into the hands of laymen, we will very soon have another separate and distinct profession, who will, in a certain sense, be competing with the medical profession, but over which they have no control. This line of treatment is going to be an important part of medicine in the future, and it behooves the medical profession at the very beginning to so organize this work that it will be a part of regular medical treatment, and not a specialty in itself.

Many surgeons will complain that they have not the time to give to this particular line of work, in which case they should see to it that their patients are referred to some institution which is directly under the control of a physician, or to some physician who makes a specialty of this kind of work. There is vast possibilities for good in all lines of rehabilitation work, and it has been so very well advertised to the public, that in the interest of all parties concerned the conduct of this line of treatment must be under the direct supervision and control of the medical profession.

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2. Report of Industrial Accident Commission.

CHRONIC DILATATION OF THE DUODENUM*

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Dilatation of the duodenum must occur when an obstruction exists distal to that part of the gastro-intestinal tract. It could naturally occur as a sequence to a dilatation of the entire length of the small intestine. It does occur much more frequently as a dilatation of the duodenum without an involvement of the intestine distal to the duodeno-jejunal angle, which is supported by the ligament of Treitz. There is invariably associated with it vague, or sometimes profound, gastric changes. The stomach symptoms are due to first a back-up, and eventually an atony of the stomach from stasis. In the hope that the one case reported in this paper may help to clear up some of the symptoms caused by this rather infrequent condition this history is offered for your consideration.

At a recent meeting of the Clinical Congress of Surgeons the writer noted the dismay of an operator who failed to find a gastric, or duodenal ulcer, but did find a very markedly dilated duodenum with an extremely patent pylorus. The appendix was removed and the abdomen closed. I am sure that the symptoms exhibited by this patient were unimproved. Undoubtedly many other operators have been confronted by the same situation and used a similar means of egress from a perplexing situation. In all honor to the

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